

heating and gave carbon dioxide when acted upon with a chromic acid mixture. In later experiments, Coehn was able to determine, in the electrolytic way, the equivalent of carbon and found it to be 3.

Turning to our observations with tartaric and citric acid, it must be that these are broken down at the anode, during electrolysis; that the carbon thus liberated from combination in these acids enters aqueous solution as a hydrate of which the carbon is cation, and this, under influence of the current, passes in its ionic form to the cathode just as a metal, in some salt, does under similar influence. When, therefore, iron is deposited from a citrate or tartrate electrolyte, the carbon ions wander with the iron ions to the cathode, and there an alloy of iron and carbon appears. This alloy, on treatment with dilute sulphuric acid, generates hydrocarbons. Very little, if any, of the carbon deposited with iron is graphitic. It is chemically combined. Just as zinc and copper, from certain electrolytes, separate as brass, so do the carbon and iron separate as an alloy from the electrolytes which have been under discussion.

The conclusions warranted from the experiments here noticed and many others like them are:

1. Carbon is deposited on the cathode from solutions containing tartaric, citric, lactic and benzoic acids. This is particularly the case if a stationary anode be used along with high current density.

2. From solutions like those in 1, where high current density is employed, platinum will dissolve from the anode and be precipitated in part upon the cathode.

UNIVERSITY OF PENNSYLVANIA.

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*Stated Meeting January 18, 1907.*

President SMITH in the Chair.

The following papers were read:

“Pennsylvania at the Jamestown Exposition, illustrated by the Lincoln Migration,” by PROF. MARION D. LEARNED, which was discussed by Mr. Richard Wood, Prof. Cheyney and Prof. Leslie W. Miller.

“Reproduction, Animal Life Cycles and the Biological Unit,” by PROF. THOMAS H. MONTGOMERY.

*Stated Meeting February 1, 1907.*

President SMITH in the Chair.

The decease was announced of Sir Michael Foster, F.R.S., on January 29, 1907, æt. 71.

PROF. EDWARD P. CHEYNEY read a paper on "The Roman Wall in Britain."

*Stated Meeting February 15, 1907.*

President SMITH in the Chair.

The following invitations were received:

From the Chicago Historical Society inviting this Society to be represented at the commemoration of the fiftieth anniversary of its incorporation on February 7, 1907, and Prof. A. A. Michelson was appointed as the Society's delegate on the occasion.

From the Seventh International Zoölogical Congress inviting the Society to be represented at the Congress to be held in Boston on August 19-23, 1907.

From the University of Upsala inviting the Society to be represented at the celebration of the two hundredth anniversary of the birth of Carolus Linnaeus on May 22d and 23d next. Dr. William W. Keen was appointed to represent the Society at this celebration.

The following communications were received:

From the Chancellor of the Smithsonian Institution announcing the appointment of Dr. Charles D. Walcott as Secretary of the Institution to succeed the late Samuel Pierpont Langley, deceased.

From the University of Aberdeen acknowledging the Society's congratulatory address on the occasion of its Quatercentenary.

From Mr. John H. Harjes, of Paris, presenting two large bronze plaques, and on motion the following minute was unanimously adopted:

Mr. John H. Harjes, with great and generous kindness, has presented to the Philosophical Society two *bas reliefs* commemorative of historic incidents in the life of Benjamin Franklin. One represents his reception by the King of France, the other commemorates the signing of the Treaty of Paris. Both are originals, of